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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,921	09/28/2001	Yongxia Wang	1898	4216

7590 05/19/2004

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EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

J. C.

<b>Office Action Summary</b>	<b>Application No.</b> 09/965,921	<b>Applicant(s)</b> WANG ET AL.	
	<b>Examiner</b> Rabon Sergent	<b>Art Unit</b> 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 4-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1711

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1 and 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merz et al. ('873) in view of Aoyama et al. ('219) or Fuhr et al. ('951) or Fesman ('105 or '044 or '485), each further in view of Lee ('040).

Merz et al. disclose reactive hot-melt polyurethane adhesives comprising the reaction product of polyisocyanates with polyols, in combination with thermoplastic materials, including acrylate polymers, and flame retardants. See abstract; column 2, lines 20+; column 3, lines 35+; and column 4, line 21.

3. Though the primary reference discloses that flame retardants may be used within the adhesive, the reference is silent with respect to the species of flame retardants. However, Aoyama et al., Fuhr et al., and Fesman each disclose the use of applicants' claimed flame retardants within polymeric compositions. Fuhr et al. and Fesman further disclose polyurethanes

Art Unit: 1711

as being suitable polymeric species. See columns 2 and 3 within Aoyama et al. See column 2 within Fuhr et al. See column 5 within Fesman. Since it has been held that it is *prima facie* obvious to utilize a known component for its known function (In re Linder, 173 USPQ 356; In re Dial et al., 140 USPQ 244), it would have been obvious to incorporate the flame retardants of the secondary references into the adhesive of Merz et al. Furthermore, Lee discloses at column 3, lines 58+ that the effectiveness of brominated flame retardants, such as ethylene bistetrabromophthalimide, can be increased by adding antimony oxide into the composition. Accordingly, it would have been obvious to incorporate the additionally claimed (claims 6 and 10) flame retardants into the adhesive of Merz et al.

4. The examiner has again considered applicants' response; however, the position is maintained that the combined teachings of the relied upon references are adequate to render the instant invention *prima facie* obvious, and applicants have not provided showings of unexpected results attributable to the use of the claimed flame retardants within polyurethane hot melt adhesives to rebut the *prima facie* case of obviousness. With respect to applicants' argument concerning Aoyama et al., it is noted that while polyurethanes are not specifically recited, polyamides and polyesters are recited as being preferred; polyamides and polyesters are similar in structure to polyurethanes, and one of ordinary skill in the art would have expected that flame retardants that are effective with these disclosed polymers would also be effective when used with polyurethanes. With respect to applicants' argument concerning Fuhr et al., it is noted that applicants' claims do not require that any UL standard be met and do not exclude the presence of additional components, such as metal oxides. With respect to applicants' argument concerning the Fesman references, applicants' remarks concerning the effects of organophosphorous

Art Unit: 1711

additives and blowing agents amount to unsubstantiated opinion and further fail to establish that the claimed flame retardants would not have been expected to be effective flame retardants within polyurethane compositions, including adhesives.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent  
May 16, 2004

  
**RABON SERGENT**  
**PRIMARY EXAMINER**